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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/759,856	01/15/2004	Christopher G. Malone	200311275-1	8746

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EXAMINER	
PAPE, ZACHARY	

ART UNIT	PAPER NUMBER
2835	

DATE MAILED: 02/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/759,856	MALONE ET AL.	
	Examiner	Art Unit	
	Zachary M. Pape	2835	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *1/15/04*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *01/15/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elko et al. (Patent # 4,894,749). With respect to claim 1, Elko et al. teaches a slot filler for usage in a rack cabinet that can accept a plurality of stacked electronic devices, the cabinet having an air inlet (11) and exit (subsequent holes adjacent 10 – Present office action Fig 2) on mutually opposing sides and a plurality of slots capable of securing the stacked electronic devices, the slot filler comprising: a blanking panel (32) capable of covering an entry opening of a slot that is unoccupied by an electronic device (Column 3, Lines 62-65); and a body (30) coupled to the blanking panel that emulates dimensions of an electronic device. Elko et al. fails to specific disclose that the body has a thickness selected so that clearance between the slot filler and an adjacent electronic device leaves an air flow gap from the air inlet to exit that is sufficiently small to create an air flow resistance preventing air from re-circling toward the air inlet. It would have been obvious to one of ordinary skill in the art at the time the invention was made to create a body thickness for maximum airflow to prevent air re-circling toward

the air inlet, since it has been held that discovering an optimum value of a result involves only routine skill in the art.

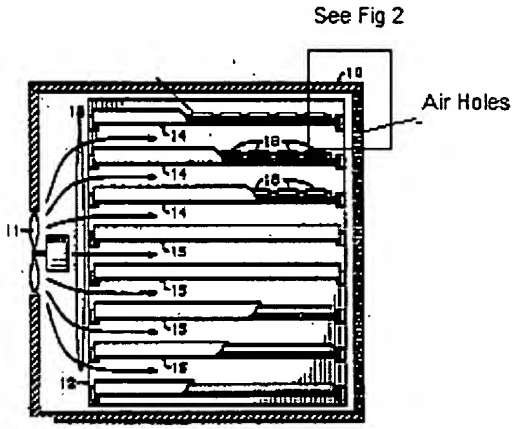

Fig 1

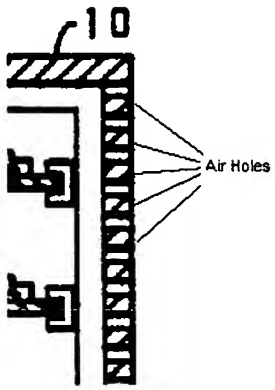

Fig 2

Fig 2 as shown above further exemplifies how the airflow is prevented from re-circling toward the air inlet as the holes provide an exit point for the airflow.

3. With respect to claim 2, Elko et al. teaches the claimed invention as described in 1 above and further teaches that the cabinet has a frontal surface (Fig 2, surface facing reader) and columns (surrounding fan 11, and incorporating subsequent holes) on lateral ends of the plurality of slots, but fails to teach that the blanking panel attaches to the columns. Helgenberg et al (Patent # 6,601,932) teaches the use of pins (17) to attach a filler plate (11) to a set of columns (6) on a cabinet. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have extended the blanking panel of Elko et al. to attach to both columns of the frontal

surface. Extending the panel gives the user a larger area from which to grasp and remove the plate and body from the cabinet.

4. With respect to claim 3, Elko et al. further teaches that the blanking panel (32) is a cosmetic plate that is used to cover open spaces in the cabinet and to facilitate controlled airflow (Column 3, Lines 29-35).

5. With respect to claim 4, Elko et al. further teaches that the blanking panel is constructed from sheet metal and/or plastic; and the body is constructed from sheet metal and/or plastic. (Column 3, Lines 58-58; since blanking panel (32) is integral with the body (30) it is also made of the same metal material)

6. With respect to claim 5, Elko et al. further teaches that the body shape is approximately a rectangular polyhedron (14 as illustrated in Fig 2).

7. With respect to claim 6, Elko et al. further teaches that the body shape is approximately a rigid rectangular plate (As illustrated in Fig 3).

8. With respect to claim 7, Elko et al. teaches the claimed invention as described in 1 above, but fails to teach that the body has an adjustable length for extension into the cabinet a controlled depth. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have made the filler boards (15) of Elko et al. adjustable in length since it has been held that the provision of adjustability, where needed, involves only routine skill in the art. In re Stevens, 101 USPQ 284 (CCPA 1954). Making the filler boards adjustable allows for the boards to mount in a variety of cabinets.

9. With respect to claim 8 Elko et al teaches a system comprising: a rack cabinet (10) capable of holding a plurality of stacked electronic devices (14); an air inlet (11) and exit (subsequent holes adjacent 10 – Present office action Fig 2) coupled to mutually opposing sides of the cabinet; a plurality of slots (Fig 2 as occupied by 14, 15) contained within the cabinet and capable of securing the stacked electronic devices; and a slot filler (15) comprising: a blanking panel (32) capable of covering an entry opening of a slot that is unoccupied by an electronic device (Column 3, Lines 62-65); and a body (30) coupled to the blanking panel that emulates dimensions of an electronic device (Column 3, Lines 26-28). Elko et al. fails to teach that the blanking panel has a thickness selected so that clearance between the slot filler and an adjacent electronic device leaves an air flow gap from the air inlet to exit that is sufficiently small to create an air flow resistance preventing air from re-circling toward the air inlet. It would have been obvious to one of ordinary skill in the art at the time the invention was made to create a body thickness for maximum airflow to prevent air re-circling toward the air inlet, since it has been held that discovering an optimum value of a result involves only routine skill in the art.

10. With respect to claim 9, Elko et al. teaches the claimed invention as described in 8 above and further teaches that the cabinet has a frontal surface (Fig 2, surface facing reader) and columns (surrounding fan 11, and incorporating subsequent holes) on lateral ends of the plurality of slots, but fails to teach that the blanking panel attaches to the columns. Helgenberg et al (Patent # 6,601,932) teaches the use of pins (17) to attach a filler plate (11) to a set of columns (6) on a cabinet. It would have been

obvious to one of ordinary skill in the art at the time the invention was made to have extended the blanking panel of Elko et al. to attach to both columns of the frontal surface. Extending the panel gives the user a larger area from which to grasp and remove the plate and body from the cabinet.

11. With respect to claim 10, Elko et al. further teaches that the blanking panel (32) is a cosmetic plate that is used to cover open spaces in the cabinet and to facilitate controlled airflow (Column 3, Lines 29-35).

12. With respect to claim 11, Elko et al. further teaches that the blanking panel is constructed from sheet metal and/or plastic; and the body is constructed from sheet metal and/or plastic. (Column 3, Lines 58-58; since blanking panel (32) is integral with the body (30) it is also made of the same metal material)

13. With respect to claim 12, Elko et al. further teaches that the body shape is approximately a rectangular polyhedron (14 as illustrated in Fig 2).

14. With respect to claim 13, Elko et al. further teaches that the body shape is approximately a rigid rectangular plate (As illustrated in Fig 3).

15. With respect to claim 14, Elko et al. teaches the claimed invention as described in 8 above, but fails to teach that the body has an adjustable length for extension into the cabinet a controlled depth. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have made the filler boards (15) of Elko et al. adjustable in length since it has been held that the provision of adjustability, where needed, involves only routine skill in the art. In re Stevens, 101 USPQ 284 (CCPA

1954). Making the filler boards adjustable allows for the boards to mount in a variety of cabinets.

16. With respect to claim 15, Elko et al. teaches a method of controlling airflow in an electronic system comprising: encasing a plurality of electronic devices (14) in a housing having multiple slots for receiving the electronic devices arranged in a stack; directing a cooling airstream (Fig 2, 18) flow over the plurality of stacked electronic devices from an air inlet (11) to an exit (subsequent holes adjacent 10); inserting a slot filler (15) within any slots unoccupied by electronic devices between the plurality of stacked electronic devices. Elko et al. fails to specifically teach arranging the plurality of stacked electronic devices and slot fillers with a selected clearance between adjacent electronic devices and/or slot fillers leaving an air flow gap from the air inlet to exit that is sufficiently small to create an air flow resistance preventing air from re-circling toward the air inlet. It would have been obvious to one of ordinary skill in the art at the time the invention was made to select a clearance between boards for maximum airflow to prevent air re-circling toward the air inlet, since it has been held that discovering an optimum value of a result involves only routine skill in the art.

17. With respect to claim 16, Elko et al. further teaches selecting dimensions and form of the slot fillers to emulate an electronic device. (Column 3, Lines 26-28)

18. With respect to claim 17, Elko et al. further teaches injecting the cooling airstream flow into the housing (via fan 11) from an air inlet in a front portion of the housing; and venting warm air from the stacked electronic devices to an exit in a rear portion of the housing (subsequent holes adjacent 10 – Present office action Fig 2).

19. With respect to claim 18, Elko et al. further teaches covering the slot filler in a slot unoccupied by an electronic device with an ornamental covering (32 – Column 3, Lines 62-65).

20. With respect to claim 19, Elko et al. teaches the claimed invention as described in 15 above, but fails to teach that the body has an adjustable length for extension into the cabinet a controlled depth. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have made the filler boards (15) of Elko et al. adjustable in length since it has been held that the provision of adjustability, where needed, involves only routine skill in the art. In re Stevens, 101 USPQ 284 (CCPA 1954). Making the filler boards adjustable allows for the boards to mount in a variety of cabinets.

21. With respect to claim 20, Elko et al. teaches a system comprising: a housing (10) with a plurality of slots (14, 16) regularly arranged in a stack for receiving multiple electronic devices (14), the housing having an air inlet (11) and an air exit (subsequent holes adjacent 10 – Present office action Fig 2) for passing cooling air through the electronic devices (As illustrated with arrows 18), at least one electronic device (14) inserted into at least one of the plurality of slots; and at least one slot filler (15) inserted into the plurality of slots, the slot fillers having dimensions that emulate dimensions of an electronic device (Column 3, Lines 26-28). Elko et al fails to teach that the at least one electronic device and the slot filler having an arrangement when inserted into the slots so that clearance between the adjacent slot fillers and/or electronic device is an air flow gap that extends from the air inlet to the air exit that is sufficiently small to create an

air flow resistance preventing air from re-circling toward the air inlet. It would have been obvious to one of ordinary skill in the art at the time the invention was made to select a clearance between boards for maximum airflow to prevent air re-circling toward the air inlet, since it has been held that discovering an optimum value of a result involves only routine skill in the art.

22. With respect to claim 21, Elko et al. teaches a system for controlling airflow in an electronic system comprising: means for encasing a plurality of electronic devices (10), means within the encasing means for receiving the plurality of electronic devices arranged in a stack (13); means for directing a cooling airstream flow over the plurality of stacked electronic devices from an air inlet to an exit (11, Column 3, Lines 28-44); and means for filling any receiving means unoccupied by electronic devices (15). Elko et al. fails to teach the receiving means, electronic devices, and filling means being arranged with a selected clearance between adjacent electronic devices and/or filling means leaving an air flow gap from the air inlet to exit that is sufficiently small to create an air flow resistance preventing air from re-circling toward the air inlet. It would have been obvious to one of ordinary skill in the art at the time the invention was made to select a clearance between boards for maximum airflow to prevent air re-circling toward the air inlet, since it has been held that discovering an optimum value of a result involves only routine skill in the art.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zachary M. Pape whose telephone number is 571-272-2201. The examiner can normally be reached Mon. - Thur. & every other Fri. (8:00am - 5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild can be reached at 571-272-2092. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Zachary Pape

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